pharmacists. The participants have demanded the Competition Act 2010 should be enforced effectively in current pharmacy practise. **CONCLUSIONS:** The unregulated pharmaceutical pricing issue had detrimental effect on the professionalism of community pharmacy practice in Malaysia. The study suggested that a medicine price regulation at the supply chain is needed to be implemented to curtail some unhealthy practice among Malaysian community pharmacists in future.

PHS109

PHARMACOECONOMICS IN NEPAL: STAGGERING GROWTH

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OBJECTIVES: To evaluate and delineate current prominence of pharmacoeconomics in Nepal, and identify the key challenges in gaining effective and economic health care. **METHODS:** Literatures review of the studies on conceptualization of pharmacoeconomics in Nepal and other developing countries. **RESULTS:** With escalating applications of economic evaluation of health care cost, majority of the middle-income and few low-income countries have already espoused pharmacoeconomics. While some Asian countries have adopted customized version of Health Technology Assessment (HTA) in reimbursing drug-use and making formulary decisions, Nepal still has an informal HTA programs with decisions made irrespective of cost effectiveness. With total expenditure on health about 5.5% of the GDP and almost non-existing (private) health insurance, large amount of drug-cost is still paid by the public, enforcing them to confront escalating drug-expenses. Two to three universities running pharmacy courses spare only a couple of hours to teach about pharmacoeconomics. **CONCLUSIONS:** Without much hype, trying to impose pharmacoeconomics model of other countries, into Nepalese health system, may not be justifiable. Poor competencies to deal with inequities, inefficient system due to fragmented resources allocation, limited power to negotiate and passive purchasing practice of the government – the key stakeholder – has impeded the concept of pharmacoeconomics. Moreover, bipolar system of pharmacy education and its practice, and lesser concern of other stakeholders – pharmaceutical companies, research organizations and the payers – are equally responsible for the staggering growth of pharmacoeconomics in Nepal. In addition, scarcity and/or accelerating brain-drain of the specialists, especially pharmacists, has further hindered the use and interpretation of HTA. Ironically, these constraints can be a driving factor to catalyze the need of adopting more formalized approaches to support health care decisions. Technical collaborations, impelling vigorous research works and funding from the better-of-positioned nations will definitely propel improvements in academic, research and health care, overall sprouting the concept of pharmacoeconomics in Nepal, at a greater speed.

PHS110

HEALTH CARE UTILIZATION, SCREENING AND PREVENTIVE PRACTICES AMONG OLDER ADULTS IN THE UNITED STATES

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OBJECTIVES: Current knowledge of health care utilization, screening and preventive practices among older adults in the United States are incomplete. This study examines current national estimates for inpatient and outpatient utilization, the receipt of flu and pneumonia shots, colonoscopy/sigmoidoscopy, mammograms, and Pap tests among older adults. **METHODS:** Cross-sectional observational study design. Analysis of nationally representative data collected from older adults 65 years and older participating in the National Health Interview Survey (NHIS) 2010, 2011. In NHIS 2010, total adults aged 65 years and older, n=5450; men, n=2139; women, n= 3311. In NHIS 2011, total adults 65 years and older, n=6902; men, n=2771; women, n= 4131. **RESULTS:** Nationally, men and women 65 years and older have similar rates of receiving a flu shot in the past year (66% and 67%, respectively, p=0.4404). Sixty-two percent of elders have ever received a pneumonia vaccine; men have significantly lower vaccine coverage (59%) than women (64%), (p=0.0005). Screening rates for colon cancer are 71% and 68% among older men and women, respectively (p=0.0616). Among older men, 62% had a prostate specific antigen test in the past 2 years. Among older women, 29% and 55% had an annual Pap test and mammogram, respectively. Twenty-three percent of elders had at least 1 emergency room visit in the past year: 22% among men, 24% among women (p=0.0484). In the past year 25% of older men and 19% of women had at least 1 overnight hospital stay (p=0.051). Utilization of outpatient doctor visits between older men and women were similar. **CONCLUSIONS:** Screening rates for flu shots and for colon cancer are high among US men and women aged 65 years and older. Older men are less likely to receive a pneumonia vaccine. Women are more likely to have had an emergency room visit in the past year. Effective approaches are recommended to increase pneumonia vaccine coverage in men.

PHS111

IMPACT OF ADVANCED VERSUS BASIC ELECTRONIC-MEDICAL-RECORD SYSTEMS ON THE QUALITY OF PATIENT CARE: A META-ANALYSIS OF 10 RANDOMIZED CONTROLLED TRIALS

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OBJECTIVES: Over the last decade, federal and state initiatives have encouraged the adoption of electronic-medical-record (EMR) systems in hospitals, emergency departments, and physician offices and clinics. These systems may have the potential to prevent adverse drug events, decrease health care costs, as well as improve care itself. Although accumulated evidence suggests that a basic EMR system with patient demographics and laboratory results improves health care over no system, less evidence is available on the relative advantages, if any, of a more advanced system, which also allows electronic reminders for interventions and screenings. Hence, the objective of the study was to conduct a meta-analysis of the available evidence to measure the impact of an advanced EMR system relative to a basic system on the quality of patient care given by providers. **METHODS:** Electronic databases, including MEDLINE and Google-Scholar, were searched for randomized controlled trials related to the objective. The composite outcome measure, termed quality of patient care, was defined as whether screening, diagnosis, providing recommended treatment, or counseling were provided during the visit. Sub-group analyses were performed for screening and providing recommended treatment. Studies with large variances were excluded. Heterogeneity was assessed using the I^2 statistic. Because I^2 exceeded 50%, a random-effects model was used. **RESULTS:** Ten studies which included 1,867 providers were included. The odds of care were 1.77 (95% CI: 0.98-3.21; p=0.059) times higher for providers with an advanced EMR system compared to those with a basic system. Sub-group analyses showed that the odds of screening patients were 1.07 (95% CI: 1.02-1.13; p=0.005) times higher and providing recommended treatment were 1.11 (95% CI: 0.91-1.35; p=0.32) times higher, compared to the basic system. **CONCLUSIONS:** Relative to providers with basic EMR systems, those with advanced systems were only slightly more effective in terms of the overall care rate and the screening rate.

PHS112

SHORT-TERM RELATIONSHIPS BETWEEN ELECTRONIC HEALTH RECORD SYSTEM INTEGRITY IN EMERGENCY DEPARTMENTS (ED) AND HEALTH CARE RESOURCE UTILIZATION

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OBJECTIVES: To assess emergency department (ED) waiting times, hospitalization rate immediately following ED visits, number of medications prescribed, and length of stay in EDs among practices with various levels of electronic health record (EHR) functionality pertaining to ED visits. **METHODS:** Data from 2006-2009 Centers for Disease Control and Prevention National Hospital Ambulatory Medical Care Survey Emergency Department files were used for this retrospective, cross-sectional study. EHR use among organizations was sequentially classified as no EHR, some EHR, basic EHR, and fully functional EHR based on the number and level of available features. Negative binomial regression models were applied using patient waiting time and length of visit as outcome variables, while logistic and ordered logistic regression models were applied using hospitalization rate and number of medications prescribed as dependent variables, respectively. Regression analyses adjusted for patient demographics (age, gender, race/ethnicity, region/location, education, income, insurance status), level of triage and comorbidity, and hospital ownership status. To provide national estimates, all results were weighted and used standard errors (SE) calculated via Taylor-series approaches. **RESULTS:** A total of 496 million ED visits were identified, where 36.1%, 33.5%, and 6.0% of visits were located at EDs with some EHR, basic EHR, and fully functional EHR, respectively. Having some, basic, and fully functional EHR was associated with 12%, 16%, and 14% increased waiting time (pooled p=0.003), and 8%, 12%, and 18% increased length of ED visit (pooled p<0.001). Any EHR use was not associated with number of medications prescribed (pooled p=0.057) and hospitalization (pooled p=0.111). However, basic or fully functional EHR use was associated with greater number of medications prescribed (pooled p=0.035) and hospitalization (pooled p=0.049) as compared with no EHR use. **CONCLUSIONS:** EHR appeared to increase short-term health care utilization but may benefit patients in the long-term due to early treatment.

PHS113

COST-EFFECTIVENESS OF A COMPUTERIZED PROVIDER ORDER ENTRY SYSTEM IN IMPROVING MEDICATION SAFETY: A CASE STUDY IN AMBULATORY CARE

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OBJECTIVES: The Health Information Technology for Economic and Clinical Health Act is driving electronic health record (EHR) adoption while requiring demonstration of *meaningful use*. Implementation of computerized provider order entry (CPOE) is integral in meeting *meaningful use* criteria, and has been shown to improve medication safety and reduce costs in the inpatient setting. However, the cost-effectiveness (CE) of CPOE in ambulatory settings remains uncertain. This study estimates the CE of CPOE in reducing medication errors and adverse drug events (ADEs) in the ambulatory setting. **METHODS:** We created a decision-analytic model to estimate the cost-effectiveness of CPOE at a large, multidisciplinary medical group over five years. We adopted the medical group's perspective and conducted our base case analysis using administrative and system costs (2010), changes in efficiency, monetary incentives for CPOE adoption, and changes in number of medication errors and ADEs following CPOE implementation. We evaluated a scenario that accounted for added office time for prescribers and staff to resolve medication errors and treat ADEs, and a scenario that incorporated revenue changes realized by the medical group, which owns four, on-site, retail pharmacies. We used one-way and probabilistic sensitivity analyses to evaluate uncertainty of the model inputs. **RESULTS:** CPOE dominated paper prescribing, costing $20 million less than paper and resulting in 1.5 million and 15.5 thousand fewer medication errors and ADEs, respectively. The model was robust to uncertainty in all inputs, and CPOE remained dominant in ≥ 99.3% of the simulations in the base case and scenario analyses. The largest drivers of uncertainty in the model were the number of chart pulls, the number of specialty providers and their hourly salaries. **CONCLUSIONS:** Our findings suggest that provider groups adopting CPOE and eliminating paper prescribing